

Stocking Stuffers

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It's December, according to the cover of this issue, and although you may be reading it in November (or January if you're behind in your reading) and I wrote it in September, this cover date is the temporal virtuality that we agree to pretend to believe in so that we can communicate. So I draw my imaginary winter coat a little tighter, brush the imaginary snow off my beard (every year there's more snow, and it gets harder to brush off), and watch my breath as I tell you that this month's column brings you word of a book about Bill Gates, a brief bio of an unusual mathematician, a look at Ted Nelson's first shipping product, and a few other little stocking stuffers. Ho ho ho.

Microsoft File Needs Sharpening [cut]

Ted Nelson Ships a Product

Now here's something unbelievable: Ted Nelson has shipped a product. It's called "ZigZag." He's been demoing it here and there, and you can download it at <http://www.xanadu.net/zigzag/>. To run it, you'll need to have Perl 5 and a curses- (or ncurses-) compatible system library installed on your system, but there's a demo runnable on a PC. I tell you the nitty-gritty of downloading it before I tell you what it is on the assumption that you are so curious about Ted Nelson's first released product that you'll download it no matter what it is. ("First released product" may not be entirely fair; it depends on how the various products of Ted's fertile mind are counted.)

If you don't know who Ted is, you should. He's the original hypertext pioneer, computer liberator, and software visionary. His story is the story of Xanadu, a software project so ambitious, so visionary, and so late that it is the stuff of multiple, overlapping legends. I've told the story often enough, and Ted tells it better anyway, so I'll just point you to his web site (<http://www.xanadu.net/>).

But what IS ZigZag?

The Full Nelson

How's this: It's a hyperstructure construction kit, a software designer's Tinkertoy set, and a generalization of the spreadsheet? A universe of generalized connections, a new world in which to build integrated software? It's a new software paradigm for organizing personal and professional data? It's a chunk of code that implements a new topology of information?

I'll have to do better than this, I can see.

If you've downloaded the demo you've seen that ZigZag is neither cosmetically appealing nor obvious in its function. No desktop. No overlapping windows. No graphics. It looks like something you might have cobbled together on your DOS machine back in the early '80s. When you start to explore it and see what it's implying, you begin to realize that this is both simple and radical. Concepts like operating system and application and file don't map well to ZigZag's world. It's a world of cells -- units of information that may be programs or data -- linked to other cells in a multidimensional space that you control.

And the control you have is near-total: While the cells in a spreadsheet are connected in fixed ways in a flat rectangular grid, ZigZag cells can be connected any way you like. ZigZag space can curve and loop, and you can invent your own dimensions.

Sounds like the web, you say? Ah, but you're getting ahead of the story.

In the demo, you can move around an information structure in three dimensions, following lines between cells, by using arrow keys or i, j, l, comma, and k or K keys. Let's see the hands of those who remember the Wordstar diamond. That's the idea.

As you move, ZigZag shows you the current cell and its immediate neighbors. Without leaving this one connected space, you walk through demos of structures for a spreadsheet, an outliner, and a four-dimensional genealogy chart, (the dimensions are name segments, name list, time, marriages), and a PDA. The PDA demo shows the power of being able to create the links you want wherever you want them. Just because you're checking your appointments that doesn't mean you don't need to keep track of air fares and anything else that happens to be connected -- in the real world -- to your appointments. With ZigZag you can make all the connections that need to be made.

I Zigged When I Shoulda Zagged

Then, just when you think you're oriented to this space, you rotate it and see other views of these dimensions, and other dimensions you didn't suspect were there in the data.

All relationships, it seems, are implemented as dimensions. Cloning a cell is done along a dimension, and you can view and move along the clone dimension just like any other. The relationship of containment employs two dimensions. The connection of the cursor to a cell lies along a cursor dimension. (The cell in the center of the view is the "accursed" cell. Part of the fun of exploring any Ted Nelson project is enjoying the language.)

I mentioned cloning; a clone is a copy of some master cell. A family of clones and their master cell all lie in a chain on a system-maintained clone dimension; editing any clone or the master changes all cells in the chain.

You can literally connect anything to anything. Every cell has a number. Typing a number followed by an arrow key connects the current cell to the cell of that number, in the direction and along the dimension indicated by the arrow key.

Dimensions, the scaffolding of the structures you build with ZigZag, are themselves under your control. You add, delete, or rearrange dimensions by editing a dimension list. A deleted dimension is not really gone, though. It can be reinstated because its connections remain.

Okay, it's trippy. But who exactly is this for?

It's for software developers. It's a toolkit, or a playground, depending on your attitude toward software development. Ted wants you to use it, to develop things in ZZ space. He's inviting collaboration. The intended end result of that collaboration, it goes without saying, is Xanadu. "I am laying the groundwork for the new Xanadu(R), which will turn the old Xanadu ideas inside-out for the Internet," Ted says.

Spy Story [cut]